



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE

United States Patent and Trademark Office

Address: COMMISSIONER FOR PATENTS

P.O. Box 1450

Alexandria, Virginia 22313-1450

www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/656,625	09/04/2003	Frank Dawidowsky	282723US8X	7983
22850	7590	02/27/2009		
OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314				
EXAMINER				
FOUD, HICHAM B				
ART UNIT		PAPER NUMBER		
2419				
NOTIFICATION DATE		DELIVERY MODE		
02/27/2009		ELECTRONIC		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

patentdocket@oblon.com

oblonpat@oblon.com

jgardner@oblon.com

Office Action Summary

Application No.

10/656,625

Applicant(s)

DAWIDOWSKY ET AL.

Examiner

HICHAM B. FOUD

Art Unit

2419

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 November 2008.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 and 15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-13 and 15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-848)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Response to Amendment

1. The amendment filed on 11-20-2008 has been entered and considered.

Claims 1-13 and 15 are pending in this application.

Claim 14 is cancelled.

Claims 1-13 and 15 remain rejected as discussed below.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-13 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gorsuch et al (US 6,388,999), hereinafter referred to as Gorsuch in view of Lodha et al (US 2003/0223430), hereinafter referred to as Lodha and further in view of Benveniste (US 2002/0163933).

For claim 1, Gorsuch discloses a method to allocate bandwidth, which method is intended for a central controller of a network (see Figure 1 element 104), comprising the following steps allocating a predetermined amount of bandwidth to a certain connection requiring a certain quality of service (see column 6 lines 21-25; subscriber 101 is granted 20 of 64 channels to allow data rate of 160kbps), wherein an owner of the certain connection is a requesting terminal which is a terminal of the network or the

central controller (see Figure 1, subscriber 101 requesting the bandwidth through the reverse or backward communication channel).

Gorsuch discloses all the subject matter with the exception of wherein the predetermined amount of bandwidth is allocated based on fixed capacity allocation and freeing a certain amount of the allocated predetermined amount of bandwidth, the certain amount being the difference of the allocated predetermined amount of bandwidth and an indicated needed amount of bandwidth indicated by the owner, wherein the indicated needed amount of bandwidth does not exceed the predetermined amount of bandwidth and when the owner indicates a new needed amount of bandwidth greater than said indicated needed amount, immediately returning as much of the freed bandwidth as required, so that the new needed amount of bandwidth is available to the owner. However, Lodha discloses a method wherein the predetermined amount of bandwidth is allocated based on fixed capacity allocation (see Figure 4B, step 406 or Figure 4A, step 402; Allocate bandwidth) and freeing a certain amount of the allocated predetermined amount of bandwidth, the certain amount being the difference of the allocated predetermined amount of bandwidth and an indicated needed amount of bandwidth indicated by the owner, wherein the indicated needed amount of bandwidth does not exceed the predetermined amount of bandwidth (see Figure 4B step 406; the unused allocated bandwidth) and when the owner indicates a new needed amount of bandwidth greater than said indicated needed amount, immediately returning as much of the freed bandwidth as required, so that the new needed amount of bandwidth is available to the owner (see Figure 4B step 408; letting the second queue borrows the

unused allocated bandwidth of the first queue (the owner); inherently, burrowing the unused and getting it back when needing it). Thus, it would have been obvious to the one skill in the art at the time of the invention to use the burrowing method of Lodha of the unused bandwidth into the method Gorsuch for the purpose of re-allocating unused bandwidth and therefore increase the efficiency of the system.

Gorsuch and Lodha disclose all the subject matter with the exception wherein the network is an ad-hoc network. However, Benveniste discloses that an ad-hoc network can be defined as the IEEE 801.11 wireless LAN network where the stations communicate directly with each other (see [0033] lines 1-9). Thus, it would have been obvious to the one skill in the art at the time of the invention to use the method of Gorsuch and Lodha in an ad-hoc network for the purpose of having the advantage of adding quickly new devices and wherein the devices can communicate with each other in a direct way without the need of access point.

For claim 2, Lodha discloses a method characterized by allocating some or all of the certain amount of freed bandwidth to a connection without quality of service requirements (see Figure 4B step 408; letting the second queue borrows the unused allocated bandwidth of the first queue (the owner)).

For claim 3, Gorsuch discloses a method wherein the requesting terminal is operated by reserving a predetermined amount of bandwidth for providing a certain quality of service for the connection (see column 6 lines 21-25; subscriber 101 is granted 20 of 64 channels to allow data rate of 160kbps) and determining the filling status of the transmit queue which indicates how much sending data is in the transmit

queue (see Figure 4 and column 8 lines 20-21; L thresholds are an indication of how much data is currently stored in the buffer), determining a needed amount of bandwidth as bandwidth needed in a next transmission frame, the needed amount of bandwidth depending on the filling status of the transmit queue and not exceeding the predetermined amount of bandwidth (see column 7 lines 7-13; a channel assignor monitors buffer usage to determine an urgency characteristic of each subscriber unit in order to dynamically assign an optimum number of channel resources to be allocated to each subscriber unit), and indicating the needed amount of bandwidth to the central controller (see column 8 lines 41-43; an urgency factor for each data source attempting to transmit on the reverse links 111 and see Figure 1; wherein the reverse link is from the subscriber unit to the base station).

Claim 4 is rejected for same reasons as claim 1 and 3.

Claim 5 is rejected for same reasons as claim 1.

For claims 6, 9, 11 and 12, Benveniste discloses that ETSI HIPERLAN/2 is the European counterpart to the American 802.11a with QOS features (see [0017]). Thus it would have been obvious to the ordinary skill in the art at the time of invention to modify the network as taught by Gorsuch and Lodha to an ad hoc network operated according to the ETSI HIPERLAN/2 standard for the purpose of the direct communication of the terminals without a network controller or base station and using the ETSI HIPERLAN/2 standard so it can operate in Europe.

Claim 7 is rejected for same reasons as claim 1.

For claim 8, Gorsuch discloses a central controller characterized by a transmit queue for buffering sending data (see Figure 4 and column 8 lines 20-21; L thresholds are an indication of how much data is currently stored in the buffer), and a monitoring means for monitoring the filling status of the transmit queue and indicating the indicated needed amount of bandwidth, which depends on the filling status of the transmit queue, to the bandwidth freeing means or bandwidth re-allocations means (see column 7 lines 7-13; a channel assignor monitors buffer usage to determine an urgency characteristic of each subscriber unit in order to dynamically assign an optimum number of channel resources to be allocated to each subscriber unit).

For claim 10, Gorsuch discloses a requesting terminal of a network having a connection with other terminals of the network or with a central controller of the network (see Figure 1; wherein the subscribers 101-103 are in connection with the base station 104), the connection requiring a certain quality of service and therefore a predetermined allocated amount of bandwidth (see column 6 lines 21-25; subscriber 101 is granted 20 of 64 channels to allow data rate of 160kbps), the requesting terminal comprising: a transmit queue for buffering sending data (see Figure 4 and column 8 lines 20-21; L thresholds are an indication of how much data is currently stored in the buffer); a monitoring means for monitoring a filling status of the transmit queue and sending out a request signal to the central controller indicating a needed amount of bandwidth, which depends on the filling status (see column 7 lines 7-13; a channel assignor monitors buffer usage to determine an urgency characteristic of each subscriber unit in order to

dynamically assign an optimum number of channel resources to be allocated to each subscriber unit).

Gorsuch discloses all the subject matter with the exception of explicitly showing that the indicated needed amount of bandwidth does not exceed the predetermined allocated amount of bandwidth) and wherein the predetermined amount of bandwidth is allocated based on fixed capacity allocation. However, Lodha discloses that the needed amount of bandwidth does not exceed the predetermined allocated amount of bandwidth (see Figure 4B step 406; the unused allocated bandwidth is the difference between the allocated bandwidth and the needed amount) and wherein the predetermined amount of bandwidth is allocated based on fixed capacity allocation (see Figure 4B, step 406 or Figure 4A, step 402; Allocate bandwidth). Thus, it would have been obvious to the one skill in the art at the time of the invention to use the burrowing method of Lodha of the unused bandwidth into the method Gorsuch for the purpose of re-allocating unused bandwidth and therefore increase the efficiency of the system.

Gorsuch and Lodha disclose all the subject matter with the exception wherein the network is an ad-hoc network. However, Benveniste discloses that an ad-hoc network can be defined as the IEEE 801.11 wireless LAN network where the stations communicate directly with each other (see [0033] lines 1-9). Thus, it would have been obvious to the one skill in the art at the time of the invention to use the method of Gorsuch and Lodha in an ad-hoc network for the purpose of having the advantage of adding quickly new devices.

For claim 13, Lodha discloses a method, wherein the allocated predetermined amount of bandwidth corresponds to a fixed reserved amount of bandwidth (see Figure 4B, step 406 or Figure 4A, step 402; Allocate bandwidth).

For claim 15, Lodha discloses a method wherein the freed bandwidth is re-allocated in a next transmission frame (see Figure 4B, step 408; the allocation of the unused bandwidth is for the next transmission frame).

Response to Argument

3. Applicant's arguments filed have been fully considered but they are not persuasive.

In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

In regard of claims 1, 4, 7 and 10 and in response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., the quality of service required by the certain connection is not affected by freeing some amount of the allocated bandwidth, because the allocation itself is fixed (see Remarks page 9 lines 6-8) and using fixed capacity allocation provides specific advantages with respect to quality of service (see Remarks page 9 lines 18-19)) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into

the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). Moreover, the applicant argued that the reference does not teach that the allocation is based on a fixed capacity allocation. However, the examiner disagrees because the term “fixed capacity allocation” is very broad and if a claim is subject to more than one interpretation, at least one of which would render the claim unpatentable over the prior art, the examiner should reject the claim over the prior art based on the interpretation of the claim that renders the prior art applicable. Ex parte Ionescu, 222 USPQ 537 (Bd. Pat. App. & Inter. 1984). In re Wilson, 424 F.2d 1382, 165 USPQ 494 (CCPA 1970). Therefore, claims are given their broadest reasonable interpretation. The Federal Circuit's *en banc* decision in *Phillips v. AWH Corp.*, 415 F.3d 1303, 75 USPQ2d 1321 (Fed. Cir. 2005). Because although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). Finally, Lodha discloses a method wherein the predetermined amount of bandwidth is allocated based on fixed capacity allocation (see Figure 4B, step 406 or Figure 4A, step 402; Allocate bandwidth), wherein the allocated bandwidth is fixed because the unused bandwidth gets borrowed and when needed, it gets returned.

In regard of claims 1 and 7, the applicant repeatedly argued the term “immediately returning”. However, the feature of the limitation is clearly met by Lodha. Lodha explicitly designates that the unused bandwidth is used by a borrower who borrows it and person of ordinary skill in the art recognize the function of the borrowing since borrow means to receive with the implied or expressed intention of

returning the same or an equivalent and to receive (something) from somebody temporarily, expecting to return it (definition). Lodha does not choose to use his own lexicography to designate the immediate reallocation of bandwidth. However, the steps performed by Lodha are the same regardless to the terminology used. Moreover, according to the specification [0007] and [0009], the term "immediately" is defined as "(i.e. as soon as possible e.g. in a next transmitting frame)", therefore, the argued term does not specify the timing of the return, nor describe the returned time as argued in the Remarks pages 10 and 11. Thus, the borrowing function reads on the claimed limitation.

In regard of claim 15, the Examiner notes that the Remarks (page 11) lack arguments since the Applicant did not discuss the references applied against the claim, explaining how the claim avoids the references or distinguishes from them. Moreover, the applicant argued that "the freed bandwidth is re-allocated in a next transmission frame" is not taught by Lodha. However, the feature of the limitation is clearly met by Lodha. Lodha explicitly designates that the freed bandwidth is re-allocated in a next transmission frame (see Figure 4B, step 408; the allocation of the unused bandwidth is for the next transmission frame "second queue to forward packets using the unused bandwidth"). Lodha does not choose to use his own lexicography to designate the re-allocation in a next transmission frame. However, the steps performed by Lodha are the same regardless to the terminology used.

Conclusion

4. THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to HICHAM B. FOUJ whose telephone number is (571)270-1463. The examiner can normally be reached on Monday - Friday 10-6 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wing F. Chan can be reached on 571-272-7493. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Hicham B Foud/
Examiner, Art Unit 2419
02/18/2009

/Wing F. Chan/
Supervisory Patent Examiner, Art Unit 2419
2/19/09